DEPARTMENT of ENVIRONMENTAL SERVICES Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: HOODS POND	Lake Area (ha):	6.07
Town: DERRY	Maximum depth (m):	1.8
County: Rockingham	Mean depth (m):	0.9
River Basin: Merrimack	Volume (m³):	55750
Latitude: 42°53'10" N	Relative depth:	0.7
Longitude: 71°19'51" W	Shore configuration:	1.00
Elevation (ft): 210	Areal water load (m/yr):	126.2
Shore length (m): 700	Flushing rate (yr^{-1}) :	137.4
Watershed area (ha): 1588.7	P retention coeff.:	0.17
<pre>% watershed ponded: 1.1</pre>	Lake type: natural	w/dam

BIOLOGICAL:	4 February 1998	19 August 1997
DOM. PHYTOPLANKTON (% TOTAL) #1	NO SAMPLES COLLECTED	DINOBRYON 55%
#2		MELOSIRA 15%
#3		MALLOMONAS 15%
PHYTOPLANKTON ABUNDANCE (units/mL)		
CHLOROPHYLL-A (µg/L)		23.84
DOM. ZOOPLANKTON (% TOTAL) #1	NO SAMPLES COLLECTED	NAUPLIUS LARVA 28%
#2		ROTIFER SPP. 15%
#3		CYCLOPOID COPEPOD 11%
ROTIFERS/LITER		899
MICROCRUSTACEA/LITER		917
ZOOPLANKTON ABUNDANCE (#/L)		1816
VASCULAR PLANT ABUNDANCE		Sparse
SECCHI DISK TRANSPARENCY (m)		0.8
BOTTOM DISSOLVED OXYGEN (mg/L)	12.7	7.1
BACTERIA (E. coli, #/100 ml) #1		22
#2		21
#3		

SUMMER THERMAL STRATIFICATION:

not stratified

Depth of thermocline (m): None Hypolimnion volume (m^3) : None Anoxic volume (m^3) : None

CHEMICAL:	Lake: HOODS POND Town: DERRY				
	4 February 1998 19 August 1997			997	
DEPTH (m)	1.0		1.0		
pH (units)	6.5		7.4		
A.N.C. (Alkalinity)	12.1		29.9		-
NITRATE NITROGEN	0.27		< 0.05		
TOTAL KJELDAHL NITROGEN	0.30		0.70		
TOTAL PHOSPHORUS	0.009		0.054		
CONDUCTIVITY (µmhos/cm)	275.0		278.0		
APPARENT COLOR (cpu)	46		90		
MAGNESIUM			1.79	-	
CALCIUM			17.2		
SODIUM			29.9		
POTASSIUM			4.30		
CHLORIDE	70		63		
SULFATE	13		10		
TN : TP	63		13		100
CALCITE SATURATION INDEX			1.2		

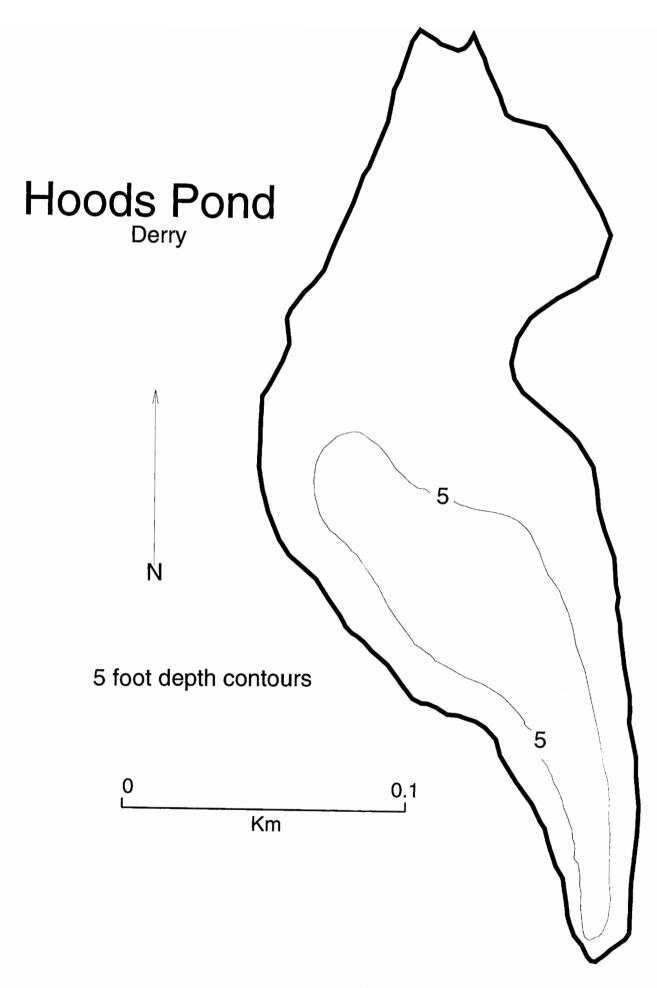
All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1997

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	5	0	4	9	Meso.

COMMENTS:

- 1. No boat access but a town beach and small park were located along the northeast shore.
- 2. This is a very productive pond with a high chlorophyll value, poor water clarity (less than 3 feet) and very abundant zooplankton numbers; but with sparse rooted plant growth. One more trophic point would have placed the pond in the eutrophic category.
- 3. This is a shallow pond with maximum depth of 6 feet near the concrete dam.
- 4. Hoods Pond is a dark tea-colored pond. Elevated conductivity, chloride and sodium (and other cations) values suggest urban runoff including salted roadways was entering the pond.



FIELD DATA SHEET

LAKE: HOODS POND DATE: 08/19/97

TOWN: DERRY WEATHER: CLEAR & SUNNY

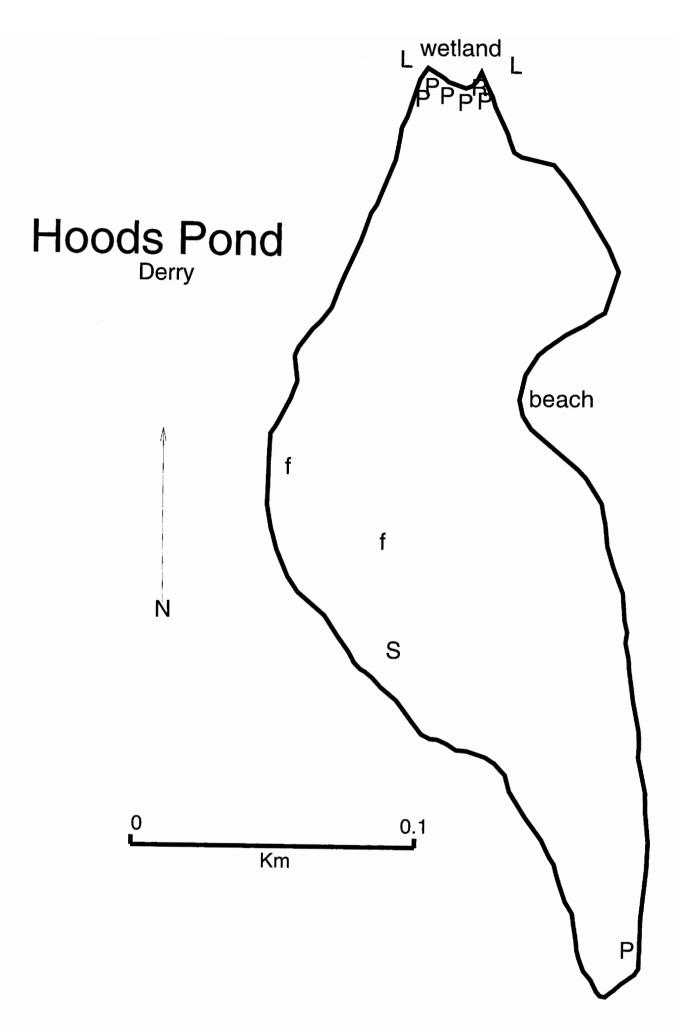
DATE: 08/19/97	ATE: U8/19/97 WEATHER: CLEAR & SUNNY			
DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION	
0.1	22.8	7.8	88 %	
1.0	22.3	7.5	85 %	
1.5	22.3	7.1	81 %	
			747-4	

SECCHI DISK (m): 0.8 COMMENTS:

BOTTOM DEPTH (m): 1.8

TIME: 1050

*Dissolved oxygen values are in mg/L



AQUATIC PLANT SURVEY

LAK	E: HOODS POND	TOWN: DERRY	DATE: 08/19/97
Key	PLANT	NAME	ADUNDANCE
кеу	GENERIC	COMMON	ABUNDANCE
P	Pontederia cordata	Pickerelweed	Sparse
A	Sagittaria	Arrowhead	Sparse
s	Sparganium	Bur reed	Sparse
f		Filamentous algae	Sparse
L	Lythrum salicaria	Purple loosestrife	Sparse
R	Phragmites communis	Reed grass	Sparse
N	Nymphaea	White water lily	Sparse
-			
		L	

OVERALL ABUNDANCE: Sparse

GENERAL OBSERVATIONS:

- 1. Macrophytes were not a problem; clumps of algae were noted floating in the pond. A sample of a filamentous algae mat along the shore was *Spirogyra*.
- 2. A wetland bordered the very northern end of the pond.
- 3. Many turtles were observed.